



Medizinische Fakultät
der Martin-Luther-Universität
Halle-Wittenberg



Universitätsklinikum
Halle (Saale)

Press Release

“RESTART-19” in Nature Communications: Hygiene Protocols to Party despite Covid

The fourth corona wave is looming. “We now see that what we announced in October 2020 as preliminary results of the RESTART-19 project is playing out in practice: Cultural and sporting events can take place indoors at lower incidence rates if – and that’s crucial – excellent ventilation technology and hygiene protocols tailored to the respective venue are in place. Hygiene protocols need to be spot-on and every event must be assessed on its own merits,” says Dr Stefan Moritz, RESTART-19 project lead and head of the Department of Clinical Infectiology at University Hospital Halle. Applying the same concept as a blueprint to all events is hardly expedient, Moritz emphasizes. Instead, adjusting approaches to the respective event is key. The results of the RESTART-19 project have now been published in *Nature Communications* ([“The risk of indoor sports and culture events for the transmission of COVID-19”, DOI: 10.1038/s41467-021-25317-9](#)).

Back in August 2020, no sporting events, theatre performance or concerts had been taking place for months because of the corona pandemic. It was at that stage that experts of University Medicine Halle ventured out to organise a concert as an experiment in spite of the pandemic. Supported by the states of Saxony-Anhalt and Saxony, the RESTART-19 project was a scientific exploration into the conditions under which cultural and sporting events could take place indoors yet again.

“The most challenging aspects of the study were evaluating the large amount of data that described contacts and movements at a high rate, the simulations around the spread of aerosols inside the venue, and the subsequent simulations of the impact on the epidemic. It took our supercomputers several days to work this out,” epidemiologist Prof Dr Rafael Mikolajczyk explains. He developed the computational model; his team evaluated the contact data and the mathematical modelling of the epidemic. “And all this had to happen in practically no time. After all, policymakers, the sports and cultural industries and the general public wanted answers and prospects,” Dr Stefan Moritz adds. The experiment had been his idea. Among Halle University’s Medical Department as well as Quarterback Immobilien Arena, the SC DHfK Leipzig handball team, the singer-songwriter Tim Bendzko and countless volunteers he was soon able to find backers for his study.

“In August 2020 – a year ago – we showed what science can do if you have it look for creative solutions. We’ve also shown that science can deliver tangible results and recommendations. We were able to do this because two ministries

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in Saxony-Anhalt and Saxony state were brave and authorised funding and approved a framework for the experiment in record time. A year down the line, but independently verified through a scientific process, we are now presenting our findings in *Nature Communications*. That means our measurements and conclusions have been checked for quality through an independent review, and they aren't just preliminary news anymore," says Prof Dr Michael Gekle, Dean of Halle University's Faculty of Medicine and one of the co-authors of this paper. These findings have been taken into account in some sectors, also in Saxony-Anhalt. "Unfortunately, scientific evidence remains not duly considered at the German national level."

RESTART 2.0: Classifying Infection Risks

Since personal contacts and the ensuing emission and dispersion of aerosol are seen as the key factors for Covid-19 infections, RESTART 2.0 has been launched as a follow-up project led by Halle University's Faculty of Medicine. Working with experts in fluid mechanics as well as experts in biofilms from the Berlin Institute of Technology and Charité University Hospital Berlin, the team are developing a standardised evaluation system that allows to classify ventilation technology at venues according to the risk of infection swiftly and effectively. To this end, the researchers are also using a new method to investigate flow characteristics. "We are expecting the results from this study by the end of this year," Moritz confirms. The follow-up project is funded at a total €650,000, €300,000 of which are being made available by the state of Saxony-Anhalt. RESTART-19 has shown that big events are highly complex vis-à-vis potential infections and thus requires further research.

At this point, most concepts for events largely rely on reducing capacity. "That's one option to have events happen again at all. To be viable in the long term, however, we also need to consider vaccinations as a factor. In conjunction with our findings, this can be the path back to normal life," Moritz highlights.

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